



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/139,296 | 08/25/1998 | TOSHIYA OHTOMO | 101809.01 | 5158 |

25944 7590 08/11/2003
OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

[REDACTED] EXAMINER

KIM, PETER B

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2851 | |

DATE MAILED: 08/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|---------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/139,296 | OHTOMO ET AL. | |
| | Examiner | Art Unit | |
| | Peter B. Kim | 2851 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 23 June 2003.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 28-33 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 28-33 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4) Interview Summary (PTO-413) Paper No(s). _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____.

DETAILED ACTION

Applicant's response filed on Jun. 23, 2003 have been fully considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 28-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishi (5,477,304).

Nishi discloses in Figures 1 and 2 and columns 8 and 9 a lithographic device comprising the following elements, which are supported or arranged in the order: a substrate stage which can be positioned by a first positioning device (ref. 31 in Nishi) in x-direction (first direction in Claim 30) and y-direction (second direction in Claim 30) where both directions are perpendicular to z-direction; an imaging system (ref. 13 in Nishi) with a main axis parallel to the z-direction; a mask stage which can be positioned parallel to the x-direction (first direction in Claim 30) by a second positioning device (ref. 24 in Nishi); and an illumination optical system (ref. 22 in Nishi)

which irradiates an exposure illumination light beam; wherein the mask stage is also positionable parallel to the y-direction (second direction in Claim 30) and rotatable (see abstract of Nishi) about an axis of rotation which is parallel to the z-direction by the second positioning device; and wherein the second positioning device is provided with a first linear motor by means of which the mask stage can be positioned over comparatively small movement parallel to the y-direction and x-direction and can be rotated about the axis of rotation of the mask stage (ref. 38, 40, 42 in Nishi) and a second linear motor by means of which the mask stage can be positioned over comparatively great movement parallel to the x-direction (first direction in Claim 30) (ref. 32A, 32B in Nishi). Further, Nishi discloses actuators (ref. 38, 40, 42) which inherently includes an electric coil system and a magnet system, while the second linear motor comprising a stationary part (ref. 32A, 32B) and a movable part (ref. 20) which is displaceable in the x-direction over a guide of the stationary part, and the magnet system of the first linear motor (Fig. 2) is fastened or connected to the mask stage (ref. 21) and the electric coil system (Fig. 2) of the first linear motor is fastened or connected to the movable part (ref. 20) of the second linear motor. Regarding the direction, the relative scanning direction is defined as the x-direction in Nishi, therefore x-direction in Nishi corresponds to the y-direction in the claimed invention.

Remarks

Rejection based on 35 U.S.C. § 112 have been withdrawn based on applicant's argument that "fastened" does not indicate that the coil system is directly fastened to the movable part of the second linear motor.

Regarding applicant's argument that actuator of Nishi is distinguishable from the linear motor of the current application, US Patent 4,770,181 to Tomoda is included to show that linear

motor is a linear actuator. (see Tomoda, col. 4, line 50-51). Also as shown by Tomoda, a linear actuator includes electric coil system (ref. 25 of Tomoda) and a magnet system (ref. 26 of Tomoda).

Because the claims 29 and 31 were not rejected based on prior art in the previous office action, the current office action is a non-final rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Kim whose telephone number is (703) 305-0105. The examiner can normally be reached on Monday-Thursday from 8:30 AM to 6:00 PM. The examiner can also be reached on alternate Fridays during the same hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703 308 2847. The fax phone numbers for the organization where this application or proceeding is assigned is 703 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 306- 3431.



Peter B. Kim
Patent Examiner
August 5, 2003



RUSSELL ADAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800



HOWARD GOLDBERG
APPROVED
TECHNOLOGY CENTER 2800